

REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-12 are now pending, wherein claims 10-12 are new.

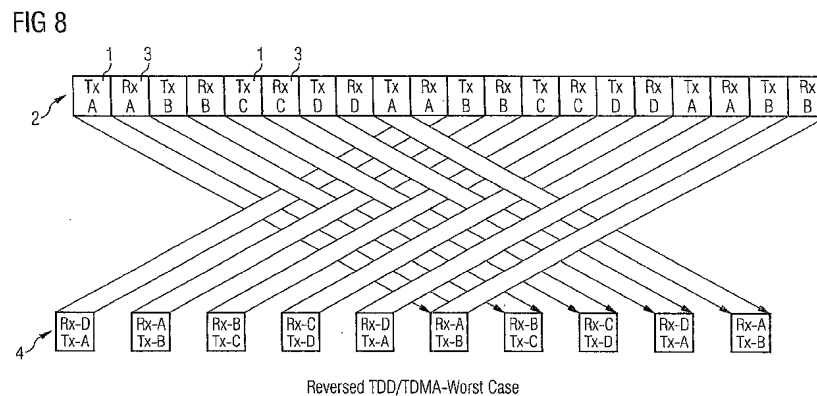
Claims 1-9 are rejected for obviousness under 35 U.S.C. § 103(a) in view of the combination of U.S. Patent No. 6,249,677 to Noerpel et al (“Noerpel”) and U.S. Patent No. 6,298,048 to Lamkin et al (“Lamkin”). This ground of rejection is respectfully traversed.

The combination of Noerpel and Lamkin does not render Applicants’ claim 1 obvious because the combination does not disclose or suggest method of communication in a time division duplex (TDD) satellite communication system or that in such a method “when the transmit time slot for one terminal causes a transmission from that one terminal to be received at another terminal overlapped in time with a receive time slot allocated for the other terminal, then those two terminals are spaced apart in distance, such that an interference path between the two terminals is negligible.”

As discussed on page 1 of the present application, time division duplexing (TDD) has typically only been used in terrestrial communication systems where the propagation delays can be kept small compared to the length to of the frames because conventional wisdom was that TDD frames required guard periods equal to the maximum round trip propagation delay in order to avoid interference. This is due to the fact that TDD systems use the same frequency for transmission and reception. Because the minimum round trip propagation delay

in satellite communications can be 240 ms, satellite communication systems typically employed frequency division duplexing (FDD) in which separate frequencies were used for transmissions from terminals to the satellites and transmissions from the satellites to the terminals.

Contrary to this conventional wisdom, Applicants' have recognized that the round trip propagation delay is not an issue as long as terminals that transmit during a particular time on a frequency are spaced sufficiently apart from terminals that receive during that particular time on the same frequency. Thus, as illustrated in FIG. 8 of the present application (reproduced below), terminal A can transmit at the same as terminal D is receiving as long as they are sufficiently spaced apart so as to minimize interference caused by terminal A's transmission on the reception by terminal D.



In contrast to Applicants' claim 1 that involves a TDD satellite communication system, Noerpel and Lamkin appear to relate to conventional FDD satellite communication systems. The Office Action cites the Abstract and FIGs. 1 and 2 of Noerpel for the disclosure of the claimed TDD satellite system. There is nothing in these sections of Noerpel disclosing or suggesting that the

system operates using TDD. Instead, in view of the issues discussed on page 1 of the present application, one skilled in the art would have considered TDD impractical in the satellite system of Noerpel and would have employed the conventional FDD technique. Accordingly, even if one skilled in the art were motivated to combine Noerpel and Lamkin, the combination would not disclose or suggest the claimed TDD satellite communication system.

Furthermore, Noerpel and Lamkin do not disclose or suggest spacing apart two terminals in the manner recited in Applicants' claim 1. The Office Action acknowledges that Noerpel does not disclose this claim element and instead cites column 5, lines 22-55 of Lamkin for this disclosure. This section of Lamkin discusses communicating with two different satellites and that due to path diversity, the positions of transmission and reception bursts may be different for different windows. Thus, this section relates to the location of bursts within transmission windows, and not the location of terminals. Accordingly, there is nothing in this section of Lamkin disclosing or suggesting that "when the transmit time slot for one terminal causes a transmission from that one terminal to be received at another terminal overlapped in time with a receive time slot allocated for the other terminal, then those two terminals are spaced apart in distance, such that an interference path between the two terminals is negligible."

Indeed, because Lamkin appears to be directed to an FDD system, Lamkin does not encounter issues with transmission and receptions occurring at the

same time over the same frequency, and accordingly does not need to space apart the terminals in the manner recited in Applicants' claim 1.

Because Noerpel and Lamkin each do not disclose or suggest a TDD satellite communication system or spacing apart terminals in the manner recited in claim 1, the combination of Noerpel and Lamkin does not render claim 1 obvious. Claims 2-9 are patentably distinguishable at least by virtue of their dependency from claim 1. Accordingly, the rejection of claims 1-9 for obviousness should be withdrawn.

New claims 10-12 recite similar elements to those discussed above and are patentably distinguishable over the current grounds of rejection for similar reasons.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned. If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038819.57537US).

Respectfully submitted,

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